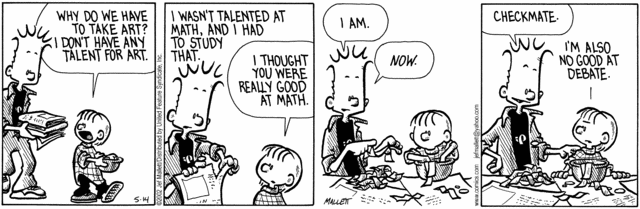
**Advanced Precalculus Topics and Differential Calculus**

[](http://comics.com/frazz/2002-05-14/)

**Teacher:** *Laurie Miller*

**Office:** *S212 (next to room 204)*

**Contact info:** [lmiller@ransomeverglades.org](mailto:lmiller@ransomeverglades.org); office phone: 460-8857

**Materials:** notebook, pencil, graphing calculator (preferably a TI-84 plus), and book (1st semester-Xanedu Course Pack, Fall 2009 and 2nd semester-Brief Calculus: An Applied Approach, Larson and Edwards, Houghton Mifflin Company, 1999.)

**Course Description & Goals:**

**Course Description:** The Advanced Precalculus portion of this course is designed to strengthen and expand the student's knowledge of PreCalculus topics. Topics included are: brief review of trigonometry, polar equations and graphs, complex numbers in polar form, vectors, data analysis, graphing functions and their transformations, parametric equations, and recursive formulas.The Calculus taught second semester is designed to provide an introduction to differential calculus. Topics included are: limits, continuity, rates of change, derivatives, graphing techniques using derivatives and applications.

**Goals:**

* Students will become adept at using problem solving theory, cooperative learning and discovery learning
* Students will strive to internalize and understand the Advanced Precalculus and Calculus concepts covered
* Students will develop their abilities and become better problem solving thinkers.

**EXPECTATIONS:**

* Students are expected to follow the guidelines for dress, and conduct as stated in the student handbook.
* Students are expected to have a ***spiral notebook*** for notes and homework.
* Students are expected to bring textbook, notebook, paper, pencil, and their homework assignment every day to class.
* *ALL COLLECTED WORK IS TO BE PLEDGED.* That is no student should give his work to another or copy another student's work.
* If a student has an *excused absence*, s/he is expected to **tell me as soon as s/he know so arrangements can be made to complete the work missed** within a reasonable period of time. If a test or quiz is missed then s/he is expected to make up the test after school on scheduled make-up days. ***Missing the day before a test will not necessarily excuse you from taking the test****.*
* Work may **NOT** be made up for *unexcused absences*, per student handbook.

**ASSIGNMENTS:** There are two different types of assignments - homework, and class work/projects.

**HOMEWORK:**  Homework/note spiral notebooks will be **checked on the day of the test**. Each assignment will count 2 points. The homework grade will be based on the ***effort* *and visible attempt***made to complete it, and not necessarily on correctness. Remember that*no problem is too difficult to attempt*. The student is expected to **date, write the page number and problems to be completed at the top of each assignment**. In addition all work must bedisplayed in a neat and orderly manner with appropriate diagrams. Any corrections made inclass should be evident. (approx. 55 points)

**CLASS WORK/Projects:** Occasionally groups of students will be asked to work on a problem or set of problems or concept. Each student in the group will receive the group's score. The group grade will be based on the thoughtfulness and thoroughness of the work. Each member of the group is expected to contribute to the assignment and to ensure that all understand the material. Students will also be asked to use the computer or graphing calculator to discover or explore a new concept and to solve problems.

# TESTS and QUIZZES:

**QUIZZES:** There will be a 15 point quiz given at the end of each week. The questions on these quizzes will be straightforward. The purpose of these quizzes is to help the student remain current in his/her study of Advance Pre Calculus Topics or Calculus. ***No make up quizzes will be provided***, ***unless s/he knows they will be absent, in which case the quiz MUST be taken before the missed day****.* If a student misses a quiz due to an unplanned absence, then I will base the quiz grade on the test that covers that material.

**TESTS:** Testswill always be announced and will occur approximately every two weeks. Each test will test the student’s knowledge of the past two weeks worth of material **AND** will also test the student’s knowledge of *any* *material previously covered*. (approx. 300 points)